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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,971	10/26/2001	Blaine D. Gaither	10018224-1	3480

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

TSAI, HENRY

ART UNIT	PAPER NUMBER
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2181

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/002,971	Applicant(s) GAITHER ET AL.	
	Examiner Henry W.H. Tsai	Art Unit 2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 and 16-20 is/are allowed.
- 6) ☒ Claim(s) 14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 14 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Strongin et al. (U.S. Patent No. 6,645,860) (hereafter referred to as Strongin et al.'860).

Referring to claim 14, Strongin et al.'860 discloses, as claimed, in CPU architecture (101, see Figs. 1 and 2) that initiates both speculative and non-speculative memory access requests within a CPU (the CPU 109 inside processor 114, see Col. 10, lines 16-20, regarding the pipelined memory access requests can be issued from the processor 114; and Fig. 2 regarding CPU memory access 1-3), an improvement comprising

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decode logic for determining whether the memory access requests are speculative (decoding the bit field encoded in, see Fig. 6A, "is the access speculative ?" in tags 502, and see also Col. 13, lines 58-62), and assessment logic for determining one or both of interconnect (see Col. 10, line 67 to Col. 11, lines 1-5, regarding only one memory access may be resident on PCI bus 118 at any particular time. Therefore, Strongin et al.'860's system assesses the bus interconnect such as traffic condition in order to determine its availability) and target resource (the system memory 130 see Fig. 1) conditions, the CPU architecture (101, see Figs. 1 and 2) processing speculative requests, or not (see Col. 23, lines 57-6, regarding speculative buffer checking and control logic 1102 removing the data from speculative cycle response buffer which saves the data associated with the speculative memory access request see Col. 25, lines 60-63), as a function of the conditions (note as set forth above, in Strongin et al.'860's system certainly bases on the condition of system memory 130 such as the availability for access; and the condition of bus interconnect (see Col. 10, line 67 to Col. 11, lines 1-5, regarding only one memory access may be resident on PCI bus 118 at any particular time) for processing the memory access request).

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As to claim 15, Strongin et al.'860 also discloses a prefetch unit (existing inside the processor 101, see Figs. 1 and 2) for prefetching speculative requests (see Col. 10, lines 16-20, regarding the pipelined memory access requests can be issued from the CPU 109 inside the processor 114; and see also Fig. 2 regarding CPU memory access 1-3), wherein the decode logic detects (by detecting the bit field encoded in, see Fig. 6A, "is the access speculative ?" in tags 502, and see also Col. 13, lines 58-62) whether prefetched requests are speculative.

Allowable Subject Matter

3. Claims 1-13, and 16-20 are allowed.

4. The following is an examiner's statement of reasons for allowance: Examiner agrees with Applicants that Strongin generates the speculative memory access requests with the memory controller, and shows tags 502 within reorder buffer 600, and not within a memory access request received by the memory controller. Therefore, Strongin et al. (U.S. Patent No. 6,645,860), the closest reference, and the other cited prior art, does not teach or fairly suggest: the step of determining whether the memory access request is speculative or not based upon a first identifier within the memory access request (in

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claim 1, and claim 16 recites the corresponding limitations). Further, the combination of the set forth limitations with all of the other limitations in the respective independent claims (claims 1, and 16) is not obvious.

Response to Amendment

5. Applicant's arguments filed 9/20/05 have been fully considered but they are not deemed to be persuasive.

Applicants argue that "Strongin does not disclose initiating both speculative and non-speculative memory access requests with an CPU. As argued above, Strongin discloses generating speculative memory access requests only within the Northbridge, and cannot, therefore, anticipate claim 14 for at least this reason." (page 9, lines 17-20). Examiner disagrees with Applicants. As set forth in the art rejections above, Strongin et al.'860 discloses, as claimed, in CPU architecture (101, see Fig. 1) that initiates both speculative and non-speculative memory access requests within a CPU (the CPU 109 inside processor 114, see Col. 10, lines 16-20, regarding the pipelined memory access requests can be issued from the processor 114; and Fig. 2 regarding CPU memory access 1-3).

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In summary, Strongin et al.'860 anticipates the claimed invention.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Henry

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Tsai whose telephone number is (571) 272-4176. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Dov Popovici, can be reached on (571) 272-4083. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC central telephone number, 571-272-2100.

8. In order to reduce pendency and avoid potential delays, Group 2100 is encouraging FAXing of responses to Office actions directly into the Group at fax number: 571-273-8300. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2100 will be promptly forward to the examiner.


HENRY W. H. TSAI
PRIMARY EXAMINER

December 12, 2005